



Docket No.: M4065.0835/P835-A  
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:  
Alexander I. Krymski et al.

Application No.: 10/787,236

Group Art Unit: 2878

Filed: February 27, 2004

Examiner: Thanh X. Luu

For: FRAME SHUTTER FOR CMOS APS

DECLARATION UNDER 37 C.F.R. § 1.132

Commissioner for Patents  
Washington, DC 20231

Dear Sir:

I, Alexander I. Krymski, of La Crescenta, CA, declare as follows:

that I was an employee of Photobit Corporation, of Pasadena, CA during the time interval from September, 1996, to October, 2001;

that as an employee of Photobit Corporation, I made inventions, and prepared documents for publication relating to such inventions;

that I am an Applicant and Co-inventor (with Vladimir Berezin) of United States Patent Application No. 10/787,236 (the Application) entitled Frame Shutter for CMOS APS;

that, as Co-inventors, Vladimir Berezin and I assigned the Application to Photobit Corporation;

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that, on information and belief, the Application has now been assigned to Micron Technology, Inc., of Boise Idaho;

that I have reviewed now-pending claims 7, 9, 10, 23 and 24 of the Application, a copy of which is attached hereto, and affirm that Vladimir Berezin and I are Co-inventors of the invention claimed therein;

that I am the Co-inventor (with Vladimir Berezin and Eric Fossum) of U.S. Patent No. 6,239,456 (the Patent), a copy of which is attached hereto;

that Co-inventors of the Patent, Vladimir Berezin, Eric Fossum and I, disclosed therein the "pinned photodiode" element, *inter alia*, of the invention as now claimed in claims 7, 9, 10, 23 and 24 of the Application; and accordingly

that (1) the subject matter of the Patent relevant to the claims (Relevant Subject Matter) was derived from the Applicants, and (2) the Applicants actually invented the Relevant Subject Matter;

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I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; further, that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment or both, under section 1001 of Title 19 of the U.S. Code and that such willful statement may jeopardize the validity of the application or any patent issued thereon.

Further declarant sayeth not.



Alexander I. Krymski

Date:

03.01.2005

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**LISTING OF THE CLAIMS**

7. An active pixel sensor comprising:  
a photoreceptor, wherein the photoreceptor comprises a pinned photodiode;  
a frame shutter, wherein the frame shutter is a PMOS frame shutter in a N-well;  
and  
an active pixel readout.
9. The active pixel of Claim 7, wherein the frame shutter includes sample and hold and reset circuits.
10. The active pixel sensor of Claim 9, wherein the sample and hold and reset circuits comprise PMOS transistors.
23. An active pixel sensor comprising:  
a photoreceptor comprising a pinned photodiode;  
an active pixel readout circuit, comprising source follower and row select transistors;  
and  
a PMOS frame shutter comprising sample and hold and reset circuits, wherein the frame shutter is in an N-well, and wherein the sample circuit is in direct electrical connection to the source follower transistor of the active pixel readout circuit.
24. The pixel sensor of Claim 23 wherein the sample and hold and reset circuits are PMOS transistors.